



Second Article: :

From PhD - Thesis) – (with another inside the specialization Sharing Published

Article title	Some factors affecting on biological aspects of <i>Tetranychus urticae</i> koch (Acari: Tetranychidae) on tomato hybrids.
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Abstract

The effect of both plant hybrid and essential oil on biological aspects of *Tetranychus urticae* reared on tomato leaves was studied. *T. urticae* was reared on four tomato hybrids namely, 550, 010 (at 20°C and 60% R.H.) and Blatenium, Super strain B (at 25°C and 65 % R.H.). Total immature on both tomato hybrids (550 and 010) for females and males were averaged (18.09 and 19.6) and (16.08 and 16.68) days, respectively. The fecundity of females was 3.75 and 2.8 eggs/female when reared on 550 and 010 hybrids respectively. Total longevity for females and males were averaged (6.85 and 7.5) and (6.7 and 6.42) days, respectively. Egg hatching for 550 hybrid was higher than 010 hybrid (90 and 88%), respectively. The fecundity of females reared on Blatenium and Super strain B were 2.75 and 3.47 eggs/female. Egg hatchability % was 88 and 80, respectively. Orange oil as an alternative pesticide was tested for its toxicity against eggs and adults of *T. urticae* Koch. LC₅₀ values for *T. urticae* adult females after 24 and 48 hours were 15128.479 and 10796.814 ppm, respectively. Biological aspects of treated mites were studied and showed that orange oil treatment could influence on biological indices of *T. urticae* in compare with control. As it greatly affected the percentage of nymphs that reached adult stages, the highest effect was recorded with directly egg treatment which obtained from untreated females and egg which obtained from treated females, while the lowest effect of orange oil on biology was observed when treated females. For directly egg treatment, mortalities in larvae, proto-nymph and deuto-nymph were 92, 95 and 98%, respectively. Mortalities were 44, 62, and 86 % and 8, 12, and 15 % on eggs from treated females and directly female treatment, respectively. Also, the effect of three concentrations (10000, 5000 and 2000 ppm) of orange oil on *T. urticae* biological aspects was studied.